

BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN

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Application of Milwaukee Water Works, Milwaukee County,  
For Authority to Increase Water Rates

Docket No. 3720-WR-107

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**REBUTTAL TESTIMONY OF MICHAEL P. RAU**  
**May 14, 2010**

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1 **Q. Please state your name, occupation and business address.**

2 A. My name is Michael P. Rau. I am the President of City Water LLC. The business  
3 address of City Water is PO Box 1726, Milwaukee, WI 53201.

4 **Q. What is City Water LLC?**

5 A. City Water LLC is a Wisconsin corporation that manages, operates, and consults with  
6 water utilities.

7 **Q. Please describe your educational and professional history.**

8 A. I have a bachelor's degree in civil and environmental engineering from the University of  
9 Wisconsin Madison, and a master's degree in environmental engineering from Marquette  
10 University. My master's thesis was "Analysis of Water Main Breaks - Case Studies."

11 I have worked in the water industry for over thirty years. As previously  
12 mentioned, I currently am the founder and President of City Water LLC. City Water  
13 manages and operates the Mequon and Brown Deer water utilities.

14 From 1999 to 2009, I was a manager at We Energies Water Services. We  
15 Energies Water Services owned the Mequon Water Utility during that entire time period  
16 and contract managed the Brown Deer Water from 2004 to 2009.

17 From 1992 to 1999, I was an associate principal at the engineering firm of  
18 Bonestroo, Rosene, Anderlik & Associates. From 1985 to 1992, I was the Utility

1 Engineer and Operations Manager for the City of Waukesha Water Utility. I was the  
2 assistant director of public works and city engineer for the City of Cudahy from 1982 to  
3 1985, and from 1977 to 1982 I was a project engineer/manager at Donohue and  
4 Associates.

5 A copy of my curriculum vitae is attached as Exhibit 2.26 to my testimony.

6 **Q. On whose behalf are you providing testimony?**

7 A.. I am providing testimony on behalf of the City of Mequon and Village of Brown Deer.

8 The City of Mequon and Village of Brown Deer are both wholesale customers of the City  
9 of Milwaukee. My testimony may also be relevant to other wholesale customers.

10 **Q. Have you reviewed the pre-filed direct testimony and exhibits submitted in this case,**  
11 **including the cost of service study (COSS) prepared by Public Service Commission**  
12 **staff?**

13 A. Yes I have.

14 **Q. What is the purpose of your testimony?**

15 A. I will address three issues raised by the pre-filed direct testimony and exhibits. Those  
16 issues are: (1) Mequon water utility system storage, (2) water main replacement,  
17 borrowing money, and equity to customers, and (3) water accountability.

18 **Q. What issue was raised in the direct testimony and COSS about Mequon's water**  
19 **utility system storage?**

20 A. In the Direct Testimony of Andrew Behm, Mr. Behm testifies that in the COSS, storage  
21 costs are not allocated to wholesale customers with the exception of Mequon and  
22 Shorewood. Mr. Behm testified that because Mequon and Shorewood do not have their  
23 own elevated storage, they must rely on MWW's storage capacity to accommodate their  
24 max hour consumptions. (D.12.16, lines 3-9).

1   **Q.     What response do you have to this testimony?**

2   A.     While the Mequon Water Utility does not have elevated storage, the system is built with  
3           greater redundancy than most systems by having a second Lake Michigan treated water  
4           supplier in the North Shore Water Commission. The supply from North Shore Water is  
5           operated as a peaker supply. When Milwaukee has supply problems or when the  
6           demands in Mequon get greater than normal, the North Shore Supply meets the peak  
7           demand automatically. The North Shore Water has auxiliary power back up so it acts in  
8           much the same way that other systems use elevated storage. The North Shore Water  
9           supply has provided max hour supply since 2008 when a booster station was constructed  
10          by the Mequon Water Utility.

11                 Additionally, the Mequon Water Utility has three (3) small reservoirs with booster  
12           pumps that act as peaker storage for high demands or fire flow. One reservoir is  
13           Whitman near the southern end of the system; another is Marseille, near the northern end  
14           of the system; and another is Concord, near the Port Washington Road commercial area.  
15           Peaker storage facilities are used to meet peak hour demands and fire flow demands.

16   **Q.     Given your testimony, do you believe that storage costs related to Milwaukee's**  
17           **system should be allocated to Mequon?**

18   A.     I don't believe so.

19   **Q.     What testimony do you wish to offer regarding the second issue you mentioned,**  
20           **water main replacement, borrowing money, and equity to customers?**

21   A.     This is an issue fully addressed by Eric Rothstein, an expert witness testifying on behalf  
22           of the intervening wholesale customers. However, I would like to add an additional  
23           perspective to this issue based upon my experience with the Brown Deer Water Utility.

1 **Q. What additional perspective do you have regarding the issue of water main**  
2 **replacement, borrowing money, and equity to customers based upon your operation**  
3 **of the Brown Deer Water Utility?**

4 A. Brown Deer Water Utility, like other utilities throughout the state, is facing the challenge  
5 of replacing deteriorating pipe. In the Brown Deer Water Utility, 1950's and 60's cast  
6 iron pipe is prevalent as the water main pipe material. This pipe breaks easily and the  
7 Utility is scheduling the pipe for replacement as quickly as the Utility can afford it and  
8 schedules allow in road reconstruction.

9 While Brown Deer prides itself in keeping borrowing and interest costs low, the  
10 Utility began borrowing money five years ago to meet the needs of this necessary main  
11 replacement program. A key consideration as the Utility management agonized over this  
12 borrowing was the equity of sharing the costs of water main replacement over several  
13 generations of property owners. Water main is a long life asset so the Utility  
14 management decided to borrow capital for these projects so the current property owner  
15 does not have to pay all the costs of an asset that will last for 100 years or more. As a  
16 result of this borrowing, Brown Deer's debt/equity ratio increased, and more money is  
17 directed to debt repayment.

18 This type of pipe replacement is needed in many utilities, including Milwaukee.

19 **Q. Given your testimony, do you believe any adjustments are needed to address the**  
20 **issue of water main replacement, borrowing money, and equity to customers?**

21 A. I believe the rate of return should be lowered since the Milwaukee Water Works has such  
22 a low debt service and has used current cash flows to fund their main replacement  
23 program. It is not fair to have existing customers pay entirely for these long term assets.

1 Milwaukee Water Works could instead borrow capital to fund at least a portion of their  
2 main replacement program.

3 **Q. What testimony do you wish to offer regarding the third issue you mentioned, water**  
4 **accountability?**

5 A. This is an issue addressed by Pat Planton, an expert witness testifying on behalf of the  
6 wholesale customers. However, I would like to provide additional testimony based upon  
7 my experience at the Brown Deer Water Utility and the Mequon Water Utility.

8 **Q. What additional testimony would you like to offer on the issue of water**  
9 **accountability?**

10 A. Brown Deer Water Utility has worked hard at keeping water losses to a minimum in its  
11 system. If losses get above 5 or 6 percent, we get worried and look hard for where the  
12 losses may be. In addition to a strong metering system, we stay active in looking for  
13 leaks in the distribution system. Distribution staff regularly surveys the system for leaks.  
14 Additionally, we hire leak detection specialists, usually every 2 years, to survey the  
15 system because of their expertise and equipment.

16 Mequon Water Utility, while it has newer pipes, also has staff do regular surveys  
17 and has hired leak detection experts approximately every 2 years. The Mequon system  
18 had formerly had water losses as high as 40 percent when the system was run by  
19 developers. However, over the last 10 years, meters have been replaced, leak surveys  
20 have been regularly conducted, and district measurements have been done to help reduce  
21 the current losses to 8 percent.

22 **Q. Given your testimony, do you believe any adjustments are needed to address the**  
23 **issue of water accountability?**

1 A. Yes. Each water utility expends funds in its own retail service area to detect and address  
2 leaks in its distribution system and at customer meters. These costs are borne by utility  
3 customers. The customers of Brown Deer and Mequon should not bear the costs of leak  
4 detection and repair both for their own systems, and for the Milwaukee distribution  
5 system. I believe the adjustment proposed in Pat Planton's testimony is needed to be fair  
6 to the customers of the wholesale communities.

7 **Q. Does this conclude your pre-filed testimony?**

8 A. Yes.

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